AMENDMENTS TO THE CLAIMS

Pursuant to 37 C.F.R. §1.121 the following is a listing of the claims of the present application that will replace all prior versions, and listings, of claims in the application.

Listing of the Claims:

1. (Currently amended) A method of treatment and/or prophylaxis of a cardiovascular disease in a subject, wherein the treatment and/or prophylaxis is a treatment, primary prophylaxis and/or secondary prophylaxis is for acute coronary syndrome, angina pectoris, cardiac infarction, stroke or peripheral arterial occlusive disease, the method comprising the step of administering to the subject before, during or after stent implantation in a vessel of the subject ~~Use of~~ an inhibitor of [[the]] multidrug resistance protein 4 (MRP4) ~~in platelets for the treatment and/or prophylaxis of cardiovascular diseases~~ wherein the inhibitor of MRP4 is a peptide, a peptide analog, a peptidomimetic, an antibody, or a neutral or anionic compound having a molecular weight of about 200 to 1000 daltons (Da), which inhibits the MRP4-mediated transport of nucleotides, or wherein the inhibitor of MRP4 is not an amphiphilic organic compound having a molecular weight of about 200 to 1000 daltons (Da).

2-3. (Canceled)

4. (Currently amended) The method [[use]] according to claim ~~3~~ 1, ~~characterized in that~~ wherein the ~~active compound is dipyridamole, indomethacin, ibuprofen, inhibitors of organic anionic transporters such as probenecid, and sulfinpyrazone, structural analogs of cyclic nucleotides such as sildenafil, trequensin, zaprinast (phosphodiesterase inhibitors) and of the leukotriene receptor antagonist MK571~~ inhibitor of MRP4 is a cyclooxygenase inhibitor or a structural analog of a cyclic nucleotide.

5. (Withdrawn) Process for the identification of a substance which inhibits the ADP transporter protein MRP4 in platelets, characterized in that

a) the substance to be investigated is brought into contact with platelets in vivo or in vitro, a platelet activator is added and the change in the concentration of an activation marker in comparison to activated platelets which are not brought into contact with the substance to be investigated is measured (in vivo or in vitro), and

b) in membrane vesicles comprising MRP4 or granules which are likewise brought into contact with the substance to be investigated, the change in labeled, absorbed cAMP or cGMP is measured in comparison to membrane vesicles or granules which are not brought into contact with the substance to be investigated,

the substance inhibiting the ADP transporter protein MRP4 in platelets if the substance in a) and/or b) in each case leads to a decrease in the particular measurement.

6. (Withdrawn) The process according to claim 5, characterized in that furthermore

c) the substance to be investigated is brought into contact with platelets in vivo or in vitro and the ADP concentration in the platelets is determined before and after, the substance inhibiting the ADP transporter protein MRP4 in platelets if the substance in a) and/or b) and/or c) in each case leads to a decrease in the particular measurement.

7. (Withdrawn) The process according to claim 5 or 6, characterized in that a) and b) or a) and b) and c) are carried out in any desired sequence.

8. (Withdrawn) Process for the preparation of a pharmaceutical composition for the treatment and/or prophylaxis of cardiovascular diseases, characterized in that a

process according to claims 4 to 7 is carried out and the substances identified are formulated using pharmaceutically acceptable excipients and/or carriers.

9. (Withdrawn) The process according to claim 8, characterized in that the treatment and/or prophylaxis of cardiovascular diseases is the therapy, primary prophylaxis and/or secondary prophylaxis of acute coronary syndrome, angina pectoris, cardiac infarction, stroke or peripheral arterial occlusive disease before, during and after stent implantation in vessels.

10-11. (Canceled)

12. (New) A method of inhibiting multidrug resistance protein 4 (MRP4)-mediated storage of adenosine diphosphate (ADP) in a platelet, the method comprising the step of contacting the platelet with an inhibitor of MRP4.

13. (New) The method of claim 12, wherein an active compound of the inhibitor of MRP4 is selected from the group consisting of indomethacin, ibuprofen, an inhibitor of organic anionic transporters, probenecid, sulfinpyrazone, a structural analog of a cyclic nucleotide, sildenafil, trequensin, zaprinast and (3-(3-(2-(7-chloro-2-quinolinyl)ethenyl)phenyl)-((3-dimethylamino-3-oxopropyl)thio)methyl)thio)propanoic acid (MK571).

14. (New) The method of claim 12, wherein the inhibitor of MRP4 is selected from the group consisting of a peptide, a peptide analog, a peptidomimetic, an antibody, a neutral or anionic compound having a molecular weight of about 200 to 1000 daltons (Da), and wherein the inhibitor of MRP4 is not an amphiphilic organic compound having a molecular weight of about 200 to 1000 daltons (Da).

15. (New) A method of inhibiting adenosine diphosphate (ADP) transport in a platelet, the method comprising the step of contacting the platelet with an inhibitor of multidrug resistance protein 4 (MRP4).

16. (New) The method of claim 15, wherein an active compound of the inhibitor of MRP4 is selected from the group consisting of indomethacin, ibuprofen, an inhibitor of organic anionic transporters, probenecid, sulfinpyrazone, a structural analog of a cyclic nucleotide, sildenafil, trequensin, zaprinast and (3-(3-(2-(7-chloro-2-quinolinyl)ethenyl)phenyl)-((3-dimethylamino-3-oxopropyl)thio)methyl)thio)propanoic acid (MK571).

17. (New) The method of claim 15, wherein the inhibitor of MRP4 is selected from the group consisting of a peptide, a peptide analog, a peptidomimetic, an antibody, a neutral or anionic compound having a molecular weight of about 200 to 1000 daltons (Da), and wherein the inhibitor of MRP4 is not an amphiphilic organic compound having a molecular weight of about 200 to 1000 daltons (Da).

18. (New) The method of claim 12 or 15 wherein the platelet is in a subject, and wherein the subject suffers from a cardiovascular disease selected from the group consisting of acute coronary syndrome, angina pectoris, cardiac infarction, stroke and peripheral arterial occlusive disease.

19. (New) A method of treatment and/or prophylaxis of a cardiovascular disease associated with platelet aggregation in a subject, wherein the treatment and/or prophylaxis is a treatment, a primary prophylaxis and/or secondary prophylaxis of acute coronary syndrome, angina pectoris, cardiac infarction, stroke or peripheral arterial occlusive disease before, during and after stent implantation in a vessel, the method comprising the step of administering to the subject probenicid or (3-(3-(2-(7-chloro-2-quinolinyl)ethenyl)phenyl)-((3-dimethylamino-3-oxopropyl)thio)methyl)thio)propanoic acid (MK571).

20. (New) A method of treatment and/or prophylaxis of a cardiovascular disease associated with platelet aggregation in a subject, wherein the treatment and/or prophylaxis is a treatment, a primary prophylaxis and/or secondary prophylaxis of acute coronary syndrome, angina pectoris, cardiac infarction, stroke or peripheral arterial occlusive disease before, during and after stent implantation in a vessel, the method comprising the step of administering to the subject an inhibitor of multidrug resistance protein 4 (MRP4), and wherein if a necessity for invasive intervention or therapy for severe hemorrhage exists in the subject, the inhibitor of MRP4 can be antagonized by transfusion of platelets to the subject.